

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A process for preparing a monohydroperfluoroalkane, bis(perfluoroalkyl)phosphinate or perfluoroalkylphosphonate
~~Process for the preparation of monohydroperfluoroalkanes, bis(perfluoroalkyl)phosphinates and perfluoroalkylphosphonates, comprising treating a~~ at least the treatment of at least one
~~perfluoroalkylphosphorane with at least one base~~

a) an alkaline earth metal hydroxide,

b) an organometallic compound, or

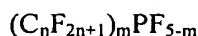
c) an organic base,

and optionally treating with ~~and, if desired,~~ an acid in a suitable reaction medium.

2. (Cancelled)

3. (Currently Amended) A process ~~Process for the preparation of~~
~~bis(perfluoroalkyl)phosphinates and perfluoroalkylphosphonates according to Claim 1,~~
~~characterised in that at least one~~ wherein the perfluoroalkylphosphorane is reacted with an
alkaline earth metal hydroxide in a ~~at least one inorganic base (b) in a suitable solvent, the~~
resultant bis(perfluoroalkyl)phosphinates and perfluoroalkylphosphonates ~~formed in addition~~
to the monohydroperfluoroalkanes are converted into the corresponding bis(perfluoro-
alkyl)phosphinic acids and perfluoroalkylphosphonic acids directly or after isolation by salt
interchange or subsequent treatment with an acid, ~~preferably sulfuric acid, and the salts are~~
obtained by subsequent neutralisation, ~~preferably using organic bases (e).~~

4. (Currently Amended) A process ~~Process~~ according to Claim 1, wherein
~~characterised in that the~~ perfluoroalkylphosphorane ~~employed~~ is a compound of the general
formula I



in which $1 \leq n \leq 8$, ~~preferably~~ $1 \leq n \leq 4$, and m in each case denotes 1, 2 or 3.

5. (Currently Amended) A process ~~Process~~ according to Claim 1, wherein ~~characterised in that~~ the perfluoroalkylphosphorane is ~~selected from the group consisting of~~ difluorotris(pentafluoroethyl)phosphorane, difluorotris(n-nonafluorobutyl)phosphorane, difluorotris(n-heptafluoropropyl)phosphorane or ~~and~~ trifluorobis(n-nonafluorobutyl)phosphorane.

6. (Cancelled)

7. (Currently Amended) A process ~~Process~~ according to Claim 1 6, wherein ~~characterised in that~~ the organic base(s) ~~is (are)~~ base is selected from the group consisting of alkylammonium hydroxides, arylammonium hydroxides, alkylaryl ammonium hydroxides, alkylphosphonium hydroxides, arylphosphonium hydroxides, alkylarylphosphonium hydroxides, alkylamines, arylamines, alkylaryl amines, alkylphosphines, arylphosphines and alkylarylphosphines.

8. (Cancelled).

9. (Cancelled)

10. (Cancelled)

11. (Currently Amended) A process ~~Process~~ according to Claim 1 9, wherein ~~characterised in that~~ the alkaline earth metal hydroxide is ~~selected from the group consisting of~~ barium hydroxide, barium hydroxide octahydrate or ~~and~~ calcium hydroxide.

12. (Currently Amended) A process ~~Process~~ according to Claim 1 2, wherein ~~characterised in that~~ the organometallic compound is ~~compounds are~~ selected from the group ~~consisting of~~ metal alkoxides, preferably alkali metal alkoxides, metal aryloxides, metal alkylthiooxides, metal arylthiooxides, alkylmetal compounds, arylmetal compounds and Grignard reagents.

13. (Currently Amended) A process ~~Process~~ according to Claim 1, wherein

~~characterised in that~~ the reaction medium is water, ~~if desired~~ optionally mixed with one or more organic solvents.

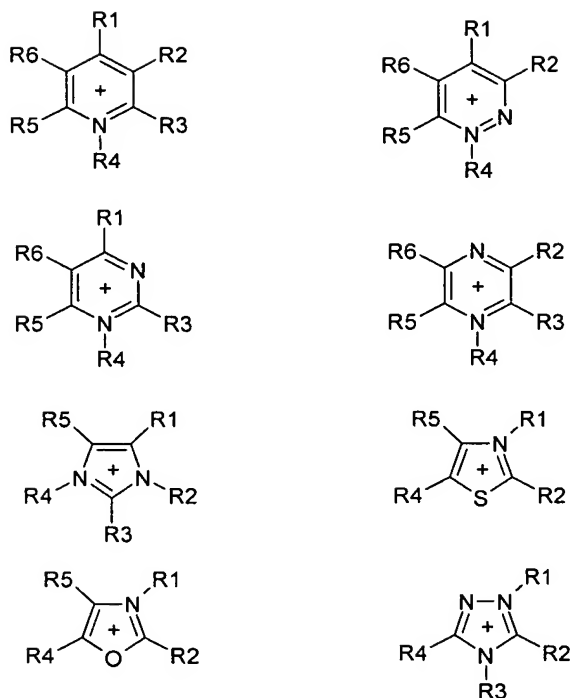
14. (Currently Amended) A process ~~Process~~ according to Claim 1, wherein ~~characterised in that~~ the reaction medium ~~employed~~ is one or more organic solvents.

15. (Currently Amended) A process ~~Process~~ according to Claim 13, wherein ~~characterised in that~~ the organic solvent is selected from ~~the group consisting of~~ alcohols, ethers, acylamides, sulfoxides, sulfones, nitriles and hydrocarbons.

16. (Currently Amended) A process ~~Process~~ according to Claim 15, wherein ~~characterised in that~~ the alcohol has ~~from~~ one to four carbon atoms in ~~the an~~ an alkyl moiety ~~and is preferably selected from the group consisting of methanol, ethanol, isopropanol and mixtures of at least two of these alcohols.~~

17. (Currently Amended) ~~Perfluoroalkylphosphonates and bis(perfluoroal)kylphosphinates~~ A perfluoroalkylphosphonate or bis(perfluoroal)kylphosphinate selected from ~~the group consisting of~~ partially alkylated and peralkylated ammonium, phosphonium, sulfonium, pyridinium, pyridazinium, pyrimidinium, pyrazinium, imidazolium, pyrazolium, thiazolium, oxazolium and triazolium salts ~~salts~~.

18. (Currently Amended) ~~Perfluoroalkylphosphonates and bis(perfluoroal)kylphosphinates~~ A perfluoroalkylphosphonate or bis(perfluoroal)kylphosphinate according to Claim 16, having a cation selected from ~~the group consisting of~~



where R^1 to R^6 are identical or different, are optionally bonded directly to one another via a single or double bond and are each, individually or together, defined as follows:

- H,
- halogen, where the halogens are not bonded directly to N,
- an C_1 to C_8 alkyl radical (C_1 to C_8), which may be partially or completely substituted by further groups, preferably F, Cl, $N(C_nF_{(2n+1-x)}H_x)_2$, $O(C_nF_{(2n+1-x)}H_x)$, $SO_2(C_nF_{(2n+1-x)}H_x)$, $C_nF_{(2n+1-x)}H_x$, where $1 < n < 6$ and $0 < x \leq 2n+1$.

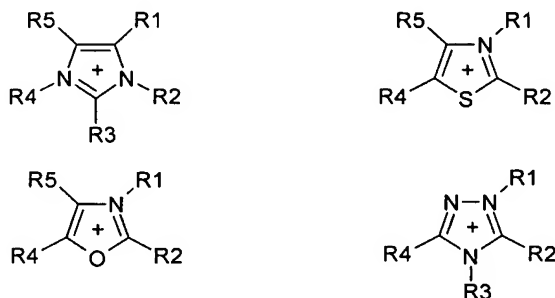
19. (Currently Amended) ~~Use of the perfluoroalkylphosphonates and bis(perfluoroalkyl)phosphinates according to Claim 17 as An ionic liquid comprising a perfluoroalkylphosphonate or bis(perfluoroalkyl)phosphinate according to claim 17 liquids.~~

20. (Currently Amended) ~~Use of the perfluoroalkylphosphonates and bis(perfluoroalkyl)phosphinates according to Claim 17 as A phase-transfer catalyst or surfactant comprising a perfluoroalkylphosphonate or bis(perfluoroalkyl)phosphinate according to claim 17 surfactants.~~

21. (New) A perfluoroalkylphosphonate or bis(perfluoroal)kylphosphinate according to Claim 18, where R^1 to R^6 are identical or different, are optionally bonded directly to one another via a single or double bond and are each, individually or together, defined as follows:

- H,
- halogen, where the halogens are not bonded directly to N, or
- an C_1 to C_8 alkyl radical, which may be partially or completely substituted by F, Cl, $N(C_nF_{(2n+1-x)}H_x)_2$, $O(C_nF_{(2n+1-x)}H_x)$, $SO_2(C_nF_{(2n+1-x)}H_x)$, $C_nF_{(2n+1-x)}H_x$, where $1 < n < 6$ and $0 < x \leq 2n+1$.

22. (New) A perfluoroalkylphosphonate or bis(perfluoroal)kylphosphinate according to Claim 18, having a cation selected from



23. (New) A perfluoroalkylphosphonate or bis(perfluoroal)kylphosphinate according to Claim 22, where R^1 to R^5 are identical or different, are optionally bonded directly to one another via a single or double bond and are each, individually or together, defined as follows:

- H,
- halogen, where the halogens are not bonded directly to N, or
- an C_1 to C_8 alkyl radical, which may be partially or completely substituted by F, Cl, $N(C_nF_{(2n+1-x)}H_x)_2$, $O(C_nF_{(2n+1-x)}H_x)$, $SO_2(C_nF_{(2n+1-x)}H_x)$, $C_nF_{(2n+1-x)}H_x$, where $1 < n < 6$ and $0 < x \leq 2n+1$.

24. (New) A process according to Claim 4, in which $1 \leq n \leq 4$.

25. (New) A process according to Claim 16, wherein the alcohol is methanol, ethanol, isopropanol or a mixture thereof.

26. (New) A process according to claim 1, wherein a perfluoroalkylphosphonate is obtained.

27. (New) A process according to claim 1, wherein a bis(perfluoro-alkyl)phosphinate is obtained.

28. (New) A process according to claim 1, wherein a monohydroperfluoroalkane is obtained.